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SEQUENCE LISTING

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<120> MHC class II haplotype specific immunodominancy of
 peptides derived from RSV fusion (F) or attachment
 (G) proteins

<130> 28902.0014

<140> (not yet assigned)

<141> 2004-12-17

<150> PCT/NL03/00454

<151> 2003-06-20

<150> EP 02077461.8

<151> 2002-06-20

<160> 29

<170> PatentIn version 3.1

<210> 1

<211> 574

<212> PRT

<213> respiratory syncytial virus

<400> 1

Met Glu Leu Leu Ile Leu Lys Ala Asn Ala Ile Thr Thr Ile Leu Thr
 1 5 10 15

Ala Val Thr Phe Cys Phe Ala Ser Gly Gln Asn Ile Thr Glu Glu Phe
 20 25 30

Tyr Gln Ser Thr Cys Ser Ala Val Ser Lys Gly Tyr Leu Ser Ala Leu
 35 40 45

Arg Thr Gly Trp Tyr Thr Ser Val Ile Thr Ile Glu Leu Ser Asn Ile
 50 55 60

Lys Glu Asn Lys Cys Asn Gly Thr Asp Ala Lys Val Lys Leu Ile Lys
 65 70 75 80

Gln Glu Leu Asp Lys Tyr Lys Asn Ala Val Thr Glu Leu Gln Leu Leu
 85 90 95

Met Gln Ser Thr Pro Pro Thr Asn Asn Arg Ala Arg Arg Glu Leu Pro
 100 105 110

Arg Phe Met Asn Tyr Thr Leu Asn Asn Ala Lys Lys Thr Asn Val Thr
115 120 125

Leu Ser Lys Lys Arg Lys Arg Arg Phe Leu Gly Phe Leu Leu Gly Val
130 135 140

Gly Ser Ala Ile Ala Ser Gly Val Ala Val Ser Lys Val Leu His Leu
145 150 155 160

Glu Gly Glu Val Asn Lys Ile Lys Ser Ala Leu Leu Ser Thr Asn Lys
165 170 175

Ala Val Val Ser Leu Ser Asn Gly Val Ser Val Leu Thr Ser Lys Val
180 185 190

Leu Asp Leu Lys Asn Tyr Ile Asp Lys Gln Leu Leu Pro Ile Val Asn
195 200 205

Lys Gln Ser Cys Ser Ile Ser Asn Ile Glu Thr Val Ile Glu Phe Gln
210 215 220

Gln Lys Asn Asn Arg Leu Leu Glu Ile Thr Arg Glu Phe Ser Val Asn
225 230 235 240

Ala Gly Val Thr Thr Pro Val Ser Thr Tyr Met Leu Thr Asn Ser Glu
245 250 255

Leu Leu Ser Leu Ile Asn Asp Met Pro Ile Thr Asn Asp Gln Lys Lys
260 265 270

Leu Met Ser Asn Asn Val Gln Ile Val Arg Gln Gln Ser Tyr Ser Ile
275 280 285

Met Ser Ile Ile Lys Glu Glu Val Leu Ala Tyr Val Val Gln Leu Pro
290 295 300

Leu Tyr Gly Val Ile Asp Thr Pro Cys Trp Lys Leu His Thr Ser Pro
305 310 315 320

Leu Cys Thr Thr Asn Thr Lys Glu Gly Ser Asn Ile Cys Leu Thr Arg
325 330 335

Thr Asp Arg Gly Trp Tyr Cys Asp Asn Ala Gly Ser Val Ser Phe Phe
340 345 350

Pro Gln Ala Glu Thr Cys Lys Val Gln Ser Asn Arg Val Phe Cys Asp
355 360 365

Thr Met Asn Ser Leu Thr Leu Pro Ser Glu Ile Asn Leu Cys Asn Val
370 375 380

Asp Ile Phe Asn Pro Lys Tyr Asp Cys Lys Ile Met Thr Ser Lys Thr
385 390 395 400

Asp Val Ser Ser Ser Val Ile Thr Ser Leu Gly Ala Ile Val Ser Cys
405 410 415

Tyr Gly Lys Thr Lys Cys Thr Ala Ser Asn Lys Asn Arg Gly Ile Ile
420 425 430

Lys Thr Phe Ser Asn Gly Cys Asp Tyr Val Ser Asn Lys Gly Met Asp
435 440 445

Thr Val Ser Val Gly Asn Thr Leu Tyr Tyr Val Asn Lys Gln Glu Gly
450 455 460

Lys Ser Leu Tyr Val Lys Gly Glu Pro Ile Ile Asn Phe Tyr Asp Pro
465 470 475 480

Leu Val Phe Pro Ser Asp Glu Phe Asp Ala Ser Ile Ser Gln Val Asn
485 490 495

Glu Lys Ile Asn Gln Ser Leu Ala Phe Ile Arg Lys Ser Asp Glu Leu
500 505 510

Leu His Asn Val Asn Ala Gly Lys Ser Thr Thr Asn Ile Met Ile Thr
515 520 525

Thr Ile Ile Ile Val Ile Ile Val Ile Leu Leu Ser Leu Ile Ala Val
530 535 540

Gly Leu Leu Leu Tyr Cys Lys Ala Arg Ser Thr Pro Val Thr Leu Ser
545 550 555 560

Lys Asp Gln Leu Ser Gly Ile Asn Asn Ile Ala Phe Ser Asn
565 570

<210> 2

<211> 306

<212> PRT

<213> respiratory syncytial virus

<400> 2

Met Ser Lys Asn Lys Asp Gln Arg Thr Ala Lys Thr Leu Glu Arg Thr
1 5 10 15

Trp Asp Thr Leu Asn His Leu Leu Phe Ile Ser Ser Cys Leu Tyr Lys
20 25 30

Leu Asn Leu Lys Ser Val Ala Gln Ile Thr Leu Ser Ile Leu Ala Met
35 40 45

Ile Ile Ser Thr Ser Leu Ile Ile Ala Ala Ile Ile Phe Ile Ala Ser
50 55 60

Ala Asn His Lys Val Thr Pro Thr Thr Ala Ile Ile Gln Asp Ala Thr
65 70 75 80

Ser Gln Ile Lys Asn Thr Thr Pro Thr Tyr Leu Thr Gln Asn Pro Gln
85 90 95

Leu Gly Ile Ser Pro Ser Asn Pro Ser Glu Ile Thr Ser Gln Ile Thr
100 105 110

Thr Ile Leu Ala Ser Thr Thr Pro Gly Val Lys Ser Thr Leu Gln Ser
115 120 125

Thr Thr Val Lys Thr Lys Asn Thr Thr Thr Thr Gln Thr Gln Pro Ser
130 135 140

Lys Pro Thr Thr Lys Gln Arg Gln Asn Lys Pro Pro Ser Lys Pro Asn
145 150 155 160

Asn Asp Phe His Phe Glu Val Phe Asn Phe Val Pro Cys Ser Ile Cys
165 170 175

Ser Asn Asn Pro Thr Cys Trp Ala Ile Cys Lys Arg Ile Pro Asn Lys
180 185 190

Lys Pro Gly Lys Lys Thr Thr Thr Lys Pro Thr Lys Lys Pro Thr Leu
195 200 205

Lys Thr Thr Lys Lys Asp Pro Lys Pro Gln Thr Thr Lys Ser Lys Glu
210 215 220

Val Pro Thr Thr Lys Pro Thr Glu Glu Pro Thr Ile Asn Thr Thr Lys
225 230 235 240

Thr Asn Ile Ile Thr Thr Leu Leu Thr Ser Asn Thr Thr Gly Asn Pro
245 250 255

Glu Leu Thr Ser Gln Met Glu Thr Phe His Ser Thr Ser Ser Glu Gly
260 265 270

Asn Pro Ser Pro Ser Gln Val Ser Thr Thr Ser Glu Tyr Pro Ser Gln
275 280 285

Pro Ser Ser Pro Pro Asn Thr Pro Arg Gln Ser Pro Pro Asn Thr Pro
290 295 300

Arg Gln
305

<210> 3
<211> 17
<212> PRT
<213> respiratory syncytial virus

<400> 3

Lys Ala Asn Ala Ile Thr Ile Leu Thr Ala Val Thr Phe Cys Phe Ala
1 5 10 15

Ser

<210> 4
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 4

Thr Ile Leu Thr Ala Val Thr Phe Cys Phe Ala Ser Gly Gln Asn Ile
1 5 10 15

Thr Glu

<210> 5
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 5

Gly Gln Asn Ile Thr Glu Glu Phe Tyr Gln Ser Thr Cys Ser Ala Val
1 5 10 15

Ser Lys

<210> 6
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 6

Glu Phe Tyr Gln Ser Thr Cys Ser Ala Val Ser Lys Gly Tyr Leu Ser
1 5 10 15

Ala Leu

<210> 7
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 7

Ser Val Ile Thr Ile Glu Leu Ser Asn Ile Lys Glu Asn Lys Cys Asn
1 5 10 15

Gly Thr

<210> 8
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 8

Ile Lys Gln Glu Leu Asp Lys Tyr Lys Asn Ala Val Thr Glu Leu Gln
1 5 10 15

Leu Leu

<210> 9
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 9

Lys Tyr Lys Asn Ala Val Thr Glu Leu Gln Leu Leu Met Gln Ser Thr
1 5 10 15

Pro Pro

<210> 10
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<212> PRT
<213> respiratory syncytial virus

<400> 10

Asn Lys Ala Val Val Ser Leu Ser Asn Gly Val Ser Val Leu Thr Ser
1 5 10 15

Lys Val

<210> 11

<211> 18

<212> PRT

<213> respiratory syncytial virus

<400> 11

Arg Leu Leu Glu Ile Thr Arg Glu Phe Ser Val Asn Ala Gly Val Thr
1 5 10 15

Thr Pro

<210> 12

<211> 18

<212> PRT

<213> respiratory syncytial virus

<400> 12

Arg Glu Phe Ser Val Asn Ala Gly Val Thr Thr Pro Val Ser Thr Tyr
1 5 10 15

Met Leu

<210> 13

<211> 18

<212> PRT

<213> respiratory syncytial virus

<400> 13

Pro Ile Thr Asn Asp Gln Lys Lys Leu Met Ser Asn Asn Val Gln Ile
1 5 10 15

Val Arg

<210> 14

<211> 17

<212> PRT

<213> respiratory syncytial virus

<400> 14

Lys Leu Met Ser Asn Asn Val Gln Ile Val Arg Gln Gln Ser Tyr Ser
1 5 10 15

Ile

<210> 15
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 15

Glu Val Leu Ala Tyr Val Val Gln Leu Pro Leu Tyr Gly Val Ile Asp
1 5 10 15

Thr Pro

<210> 16
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 16

Val Gln Leu Pro Leu Tyr Gly Val Ile Asp Thr Pro Cys Trp Lys Leu
1 5 10 15

His Thr

<210> 17
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 17

Thr Asp Arg Gly Trp Tyr Cys Asp Asn Ala Gly Ser Val Ser Phe Phe
1 5 10 15

Pro Gln

<210> 18
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 18

Tyr Asp Cys Lys Ile Met Thr Ser Lys Thr Asp Val Ser Ser Ser Val
1 5 10 15

Ile Thr

<210> 19
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 19

Lys Asn Arg Gly Ile Ile Lys Thr Phe Ser Asn Gly Cys Asp Tyr Val
1 5 10 15

Ser Asn

<210> 20
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 20

Tyr Tyr Val Asn Lys Gln Glu Gly Lys Ser Leu Tyr Val Lys Gly Glu
1 5 10 15

Pro Ile

<210> 21
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 21

Leu Ile Ala Val Gly Leu Leu Leu Tyr Cys Lys Ala Arg Ser Thr Pro
1 5 10 15

Val Thr

<210> 22
<211> 18
<212> PRT
<213> respiratory syncytial virus

<400> 22

Ser Leu Gly Ala Ile Val Ser Cys Tyr Gly Lys Thr Lys Cys Thr Ala
1 5 10 15

Ser Asn

<210> 23
<211> 14
<212> PRT

<213> respiratory syncytial virus

<400> 23

Asp Phe His Phe Glu Val Phe Asn Phe Val Pro Cys Ser Ile
1 5 10

<210> 24

<211> 18

<212> PRT

<213> respiratory syncytial virus

<400> 24

Ser Asn Asn Pro Thr Cys Trp Ala Ile Cys Lys Arg Ile Pro Asn Lys
1 5 10 15

Lys Pro

<210> 25

<211> 15

<212> PRT

<213> respiratory syncytial virus

<400> 25

Phe Glu Val Phe Asn Phe Val Pro Cys Ser Ile Cys Ser Asn Asn
1 5 10 15

<210> 26

<211> 16

<212> PRT

<213> respiratory syncytial virus

<400> 26

Phe Asn Phe Val Pro Cys Ser Ile Cys Ser Asn Asn Pro Thr Cys Trp
1 5 10 15

<210> 27

<211> 16

<212> PRT

<213> respiratory syncytial virus

<400> 27

Ser Ile Cys Ser Asn Asn Pro Thr Cys Trp Ala Ile Cys Lys Arg Ile
1 5 10 15

<210> 28

<211> 15

<212> PRT

<213> respiratory syncytial virus

<400> 28

Trp Ala Ile Cys Lys Arg Ile Pro Asn Lys Lys Pro Gly Lys Lys
1 5 10 15

<210> 29

<211> 15

<212> PRT

<213> respiratory syncytial virus

<400> 29

Ile Cys Lys Arg Ile Pro Asn Lys Lys Pro Gly Lys Lys Thr Thr
1 5 10 15

